

**Claims:**

1. A method of manufacturing a board, the method comprising:

- 5       providing upper and lower sheets of material;  
          inserting the upper and lower sheets of material into  
          an interior of a mold cavity;  
          forming the upper and lower sheets of material to the  
          interior of the mold cavity to form a shell;  
10       filling the shell with an expandable material; and  
          preventing the shell from substantially deforming  
          during filling with the expandable material.

2. The method of manufacturing a board in accordance  
15 with claim 1, wherein the step of inserting the upper and  
lower into an interior of a mold cavity includes:

- positioning the upper sheet of material above the  
          lower sheet of material; and  
          clamping a perimeter of the upper sheet of material  
20 and a perimeter of the lower sheet of material.

3. The method of manufacturing a board in accordance  
with claim 2, including the step of providing a gasket  
between the perimeter of the upper sheet and the perimeter  
25 of the lower sheet.

4. The method of manufacturing a board in accordance  
with claim 2, including the step of spacing at least a  
portion of the upper and lower sheets of material apart.  
30

5. The method of manufacturing a board in accordance  
with claim 4, including the step of blowing fluid between  
the upper and lower sheets of material for spacing at least  
a portion of the upper and lower sheets of material apart.  
35

6. The method of manufacturing a board in accordance with claim 5, wherein the step of blowing fluid between the upper and lower sheets of material for spacing at least a portion of the upper and lower sheets of material apart includes passing a fluid inlet tube through the gasket.

7. The method of manufacturing a board in accordance with claim 1, wherein the step of forming the upper and lower sheets of material to the interior of the mold cavity to form a shell includes:

heating the upper and lower sheets of material; and  
forcing the upper and lower sheets of material against interior walls of the mold cavity.

8. The method of manufacturing a surfboard in accordance with claim 7, wherein the step of forcing the upper and lower sheets of material against interior walls of the mold cavity includes at least one of drawing the upper and lower sheets of material against the interior walls with a vacuum and forcing the upper and lower sheets of material against the interior walls with a pressure force between the sheets.

9. The method of manufacturing a board in accordance with claim 1, including the step of trimming excess portions of the first and second sheets of material after forming the shell.

10. The method of manufacturing a board in accordance with claim 1, wherein the step of filling the shell with the expandable material comprises the steps of:

forming an aperture in the shell;  
inserting a filling device through the aperture; and  
passing the expandable material through the filling device and into the shell.

11. The method of manufacturing a board in accordance with claim 10, wherein the expandable material is at least one of polyurethane and polystyrene.

5

12. The method of manufacturing a board in accordance with claim 11, including the step of withdrawing the filling device from within the shell while the shell is being filled with the expandable material.

10

13. The method of manufacturing a board in accordance with claim 10, wherein the step of preventing the shell from substantially deforming during filling with the expandable material comprises the step of placing the shell in a mold cavity having an internal dimension substantially similar to an external dimension of the shell.

14. The method of manufacturing a board in accordance with claim 13, including the step of heating the mold cavity to allow the expandable material to at least partially bond to the shell.

15. The method of manufacturing a board in accordance with claim 1, including the step of applying graphics to at least one of first and second sheets of material prior to the step of inserting the upper and lower sheets of material into an interior of a mold cavity.

16. The method of manufacturing a board in accordance with claim 1, wherein the first and second sheets of material comprise at least one of polycarbonate, ABS and TPO.

17. A method of manufacturing an apparatus, the method comprising:

means for forming at least two sheets of material to the interior of a mold cavity to form a shell;

means for filling the shell with an expandable material; and

5 means for preventing the shell from substantially deforming during filling with the expandable material.

18. The method of manufacturing an apparatus in accordance with claim 17, wherein the apparatus comprises  
10 a floatable board.

19. A board comprising:

a polymer shell having first and second sheets of material, the first and second sheets of material each  
15 having a perimeter, the perimeters of the first and second sheets of material being bonded together; and

a core of a material different than the material of the first and second sheets, the core substantially filling the interior of the shell and having residual compressive  
20 stresses providing structural rigidity to the shell.

20. A board in accordance with claim 18, wherein the material of the core comprises at least one of polyurethane and polystyrene and the material of the polymer shell  
25 comprises at least one of polycarbonate, ABS and TPO.

21. A board in accordance with claim 19, wherein graphics are disposed on the interior of the shell between the shell and the core.